Medical Science

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Patients' attitude towards deprescribing among elderly inpatients with polypharmacy at tertiary academic hospital: A cross-sectional study

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ABSTRACT

Objectives: To identify elderly inpatients' attitudes toward deprescribing at King Khalid University Hospital and determine the most commonly used polypharmacy drugs. *Methods:* A cross-sectional study on deprescribing in elderly patients was conducted at Riyadh's King Saud university medical city during January-February/2019. We used the validated Arabic version of the Patient Attitude toward Deprescribing (rPATD) questionnaire. *Results:* One hundred fourteen patients completed the questionnaire with a response rate of 83%. The participants' mean age was 68.9 ± 7.4. Most were females (54.4%), married (86.8%), and illiterate (42.1%). Despite 63% of the patients feeling that they were taking many medicines, 58.8% of the participants did not perceive a financial burden of medications. The median (range) of comorbidities was 3(6). The cardiovascular and metabolic diseases account for (86.0%) and (79.8%). Patients took a median (range) of 8(12) medications. The most were statins (48.2%), proton pump inhibitor (46.4%), beta-blocker (41.8%), insulin (38.2%), biguanides (35.5%) and Anticoagulants (22.7). Overall, 87.7% would like to some of their drugs if their physicians allow it, although 80.7% reported satisfaction with their drugs. The positive attitude towards deprescribing) accounted for 48.2%. It was higher among those younger 80, p<0.05. Also, the illiterate scored higher median than other educational groups on the burden factor subscale, p<0.01. *Conclusion:* The majority of elderly patients are willing to deprescribe when it is appropriate. We recommend the utilization of clinical pharmacists' expertise to simplify the polypharmacy for patients. Further studies should be held to obtain more evidence to initiate the deprescribing process**.**

Keywords: Polypharmacy, deprescribing, attitude**,** older adults

1. INTRODUCTION

Advances in medical conditions treatment helped more people live longer with multiple comorbidities, contributing to an aging population (Mathers et al., 2015). Managing patients with multimorbidity is a big concern for healthcare systems internationally. Polypharmacy practice is deal with multiple morbidities increase the burden of potentially inappropriate medication. This complex situation is challenging in clinical practice (Croke et al., 2021). World Health Organization defines polypharmacy as the simultaneous consumption of five or more different medications (Organization, 2019). It is very common in clinical practice; researchers usually focus on the geriatric field (Martinelli, 2021). Many factors may contribute to polypharmacy among the elderly, such as seeing multiple care providers, poor medication knowledge, influencing aggressive pharmaceutical marketing, and the consequent growth in the prevalence of multimorbidity. Furthermore, Patient healthcare providers may feel guilty if they deviate from guidelines (Alfayez et al., 2017; Alhabib et al., 2016; Davies et al., 2020; Hsu et al., 2021; Kua et al., 2021; Sirois et al., 2017; Takane et al., 2013).

Polypharmacy as a public health problem is rising with time, and the percentage differs worldwide. For example, in Malaysia, Sweden, and Korea, the prevalence among older adults is 56.9%, 45%, 86.4%, respectively (Kim et al., 2014; Wastesson et al., 2018; Lim et al., 2017). While in the United States' older adults, over 50% regularly used at least five medications (Held et al., 2017). Furthermore, in Asian regions, polypharmacy data varies between 39% and 89%, depending on the definition, settings, and the age of the subjects (Wang et al., 2015). Many studies identified that the most commonly used drugs are lipid-lowering medications which were reported by 45.2% of elderly with multiple drug use, followed by antiulcer (24.9%), angiotensin-converting enzyme (ACE)-Inhibitors (22.7%), and beta-blockers (22.2%) (Kim et al., 2018; Schafer et al., 2018).

Drug-related admissions have significantly increased over the past few decades. Around 5–10% of inpatient admissions were due to drug-related problems (DRP). Furthermore, 50% of these admissions can be prevented (Nivya et al., 2015). In addition, at least 96% of outpatients on polypharmacy experienced some probable interaction among drugs (Nusair et al., 2020). A study showed that the probability of having adverse drug events among geriatric patients is estimated to be 6% when two drugs are taken, increases to 50% when five drugs are taken, and reaches 100% when eight or more drugs are taken simultaneously (Garrett & Martin, 2003). Thus, in addition to the adverse drug events, polypharmacy may result in compliance issues, management errors, hospitalization, fall-related outcomes, and premature mortality among the elderly (Machado-Alba et al., 2017).

One of the possible solutions to control polypharmacy is introducing deprescribing to the health care system to reduce many of the negative effects. In addition, there is evidence that withdrawal of some medications may improve the management outcomes (Holmes & Todd, 2017). The deprescribing is defined as the way of discontinuing or tapering medicines that are judged inappropriate in apatient under the supervision of a healthcare professional (Kalogianis et al., 2016). We would think that this practice will be increasingly recognized as part of good clinical care. The treating physicians should screen the entire patient's medications, including the home ones, avoid high-risk medicines, and deprescribe drugs potentially inappropriate for such patients (Martinelli, 2021).

In a Canadian study, only 6.9% of the surveyed population were aware with the terminology "deprescribing" (Turner & Tannenbaum, 2017). However, patients' attitudes toward deprescribing should be assessed. Some aspects impact their attitude towards deprescribing: medications' beneficial effects, not believing in medication side effects, long-standing use and the acceptance of the diseases by the patients, the availability of non-pharmaceutical options, and the fear of medications' harmful effects (Reeve et al., 2018; Reeve et al., 2013; Turner & Tannenbaum, 2017).

Previous studies showed that 89% of hospitalized elderly patients on five or more medications are willing to discontinue some drugs (Galazzi et al., 2016). Old adults taking numerous medications are more willing to deprescribe. In a study, 78.9% of residents taking ≥ nine medications were ready to deprescribe some of them (Kalogianis et al., 2016). No doubt making the patients aware of inappropriate prescriptions and the term deprescribing will increase the engagement of the elderly in deprescribing, which will improve the quality of life. In addition, the physicians are responsible for monitoring side effects and drug-drug interactions as well as educating their older patients on the medications and deprescribing. There are still only a few interventional studies addressing the management of multimorbidity and reducing the number of medications.

A study in Saudi Arabia showed that the prevalence of polypharmacy is 46% of adult patients (Balkhi et al., 2017). Moreover, the number of studies about polypharmacy among the elderly was insufficient, and we were unable to find studies on deprescribing in the Saudi population. Therefore, this investigation aimed to identify elderly inpatients' attitudes toward deprescribing at an academic tertiary hospital and determine the most commonly used drugs in elderly inpatients with polypharmacy.

2. METHODS

The authors conducted a cross-sectional study on inpatients hospitalized at King Khild university hospital in Riyadh (January-February/2019). First, the list of all patients admitted (January- February) was obtained to select the participants by simple random. The randomly selected patients were aged (>= 60), had multiple morbidities (≥3 chronic diseases), and were on polypharmacy (taking ≥five chronic medications) based on their medical records and communicating in the Arabic language. Elements of exclusion were patients with impaired cognitive or functional ability who were incapable of effective communication. Using the formula [n= Z^2 (p (1-p)/ d2], a sample size of 105 were estimated at a 95 % confidence level, an 84% willingness to deprescribe based on the average previous literature and d= 7% precision. $Z^2 = (1.96^2)$ (Galazzi et al., 2016; Kalogianis et al., 2016). To account for drop out 20% of participants were added. Therefore the final sample size estimation was 126 subjects. A pilot study was conducted on 20 hospitalized elderly patients who were excluded from the original study sample.

The investigators explained the study's purpose to the participants, and informed consent was taken before administering an interview-based or self-administered questionnaire. The participants took part voluntarily and had the right to opt out at any time without the researchers' obligation. Besides, participants' anonymity was assured by assigning each participant with a code number for analysis only. For each participant in the study, we collected personal data such as age, sex, marital status, level of education. Also, the type of medical conditions, the number, and the type of medications were collected. Furthermore, the data were confirmed from their medical records. The authors utilized the revised Patients' Attitudes towards Deprescribing questionnaire (rPATD) to collect data from the participants and caregivers towards deprescribing. The (rPATD) was developed in Australia for patients taking multiple drugs (Qi et al., 2015; Reeve et al., 2016). Also, it was validated in other languages (Lundby et al., 2020). We used the validated Arabic version of the questionnaire (Nusair et al., 2020). The rPATD questionnaire investigated five domains: perceived burden, belief inappropriateness, Concerns about stopping, Involvement in medication management, and Global questions (Reeve et al., 2019; Roux et al., 2020). These factors contain twenty-two items. The participants entered their answers using the Likert score: strongly agree, agree, neutral, disagree, and strongly disagree. For analysis, we merged strongly agree and agree and gave it a score of 3 points and merged disagree and strongly disagree and gave it a score of 1 point while the neutral was given 2 points. This merging was done due to small numbers in cells. The median scores were calculated for each of the subscales and the total scale. Higher scores mean a positive attitude toward deprescribing of their polypharmacy.

The SPSS Statistics was used for analysis. Descriptive statistics included frequency, the median and IQR of continuous variables. For categorical variables percentages were used. In addition, the Chi2 test was used in categorical variables. Simultaneously, Mann Whitney U and Kruskal Wallis tests compared medians among various groups. To predict participants' characteristics that influenced attitude, we use Binary logistic regression of participants' characteristics (independent variables) by attitude towards deprescribing as expressed above and below the median (dependent variables). A p-value of <0.05 denoted the statistical significance.

3. RESULTS

One hundred thirty-eight patients were interviewed for participation in this study. Twenty-four participants were not able to complete the questionnaire. Resulting in one hundred fourteen who completed the study and the response rate was 83%. The mean age of our participants is 68.9+7.4. Most of patients were aged 60-69(56.1%), females (54.4%), married (86.8%), and illiterate (42.1%). The overall median (range) score of rPATD was 41(36). The patients who scored more than the median score of rPATD (positive attitude towards deprescribing) accounted for 48.2%. The median scores were higher among the age group 60-69, men, the unmarried, low educated, and those patients receiving 5-8 medications compared to other groups. However, the differences among the groups were not statistically significant (Table 1).

According to (PATD) questionnaire the patients reported the following to Deprescribing. 87.7% were ready to prescribe some of their routine drugs if their doctors allow it, despite the fact that 80.7 percent reported satisfaction with their drugs. A 68.4% would not feel that the doctor is giving up on them. 63.2% of the patients agreed that they were on too many medicines. Interestingly, 58.8% of our participants did not perceive their medications' financial burden, although the number of drugs is high and should be a financial burden on them. Eminently, 80.7% of our patients reported a decent comprehension of the purposes behind endorsed prescriptions, and 84.2% knew of the exact up-to-date list of current medicines. Moreover, 80.7% showed their willingness to increase their knowledge about their drugs further. However, this result was discordant with what we observed during the data collection process; we found difficulties obtaining correct information about their medications when asked about them (Table 2) and (Figure 1).

Table 1 demographic characteristics by median score of rPATD (n=114)

Characteristic	N (%)	Median (range)	p-value
Age in years			
60-69	64 (56.1)	42(36)	
70-79	40 (35.1)	41.5(32)	
>=80	10 (8.8)	38(11)	0.31
Sex			
male	52 (45.6)	42(35)	
female	62 (54.4)	40(34)	0.48
Marital status			
married	99 (86.8)	41(36)	
unmarried	15 (13.2)	42(26)	0.63
Educational level			
illiterate	48 (42.1)	41(27)	
below secondary	27 (23.7)	42(23)	
secondary and higher	39 (34.2)	39(31)	0.08
Number of medications			
5-8 medications	75(65.8)	42(36)	
>=9 medications	39(34.2)	40(28)	0.23

The mean age of our participants 68.9$\pm$7.4

Median (range) of rPATD was 41(36)

The patients who scored more than the median score of rPATD (positive attitude towards deprescribing) accounted for 48.2%.

Table 2 Response to rPATD questionnaire   (n=114)

Statement	Agree n (%) 3	Neutral n (%) 2	Disagree n (%) 1
Burden factors			
B1) I spend a lot of money on my medicines	44 (38.6)	5 (4.4)	65 (57.0)
B2) Taking my medicines every day is very inconvenient	55 (48.2)	19 (16.7)	40 (35.1)
B3) I feel that I am taking a large number of medicines	72 (63.2)	9 (7.9)	33 (28.9)
B4) I feel that my medicines are a burden to me	43 (37.7)	21 (18.4)	50 (43.9)
B5) Sometimes I think I take too many medicines	50 (43.9)	13 (11.4)	51 (44.7)
Appropriateness factor			
A1) I feel that I may be taking one or more medicines that I no longer need	21 (18.4)	26 (22.8)	67 (58.8)
A2) I would like to try stopping one of my medicines to see	39 (34.2)	11 (9.6)	63 (55.3)
A3) I would like my doctor to reduce the dose of one or more of my	62 (54.4)	23 (20.2)	29 (25.4)

medicines

A4) I think one or more of my medicines may not be working	24 (21.1)	20 (17.5)	70 (61.4)
A5) I believe one or more of my medicines may be currently giving me side effects	48 (42.1)	20 (17.5)	46 (40.4)

Concerns about stopping factor

C1) I would be reluctant to stop a medicine that I had been taking for a long time	39 (34.2)	15 (13.2)	59 (51.8)
C2) If one of my medicines was stopped, I would be worried about missing out on future benefits	34 (29.8)	20 (17.5)	60 (52.6)
C3) I get stressed whenever changes are made to my medicine	39 (34.2)	13 (11.4)	62 (54.4)
C4) If my doctor recommended stopping a medicine, I would feel that he/she was giving up on me	11 (9.6)	25 (21.9)	78 (68.4)
C5) I have had a bad experience when stopping a medicine before	38 (33.3)	16 (14.0)	60 (52.6)

Involvement factor

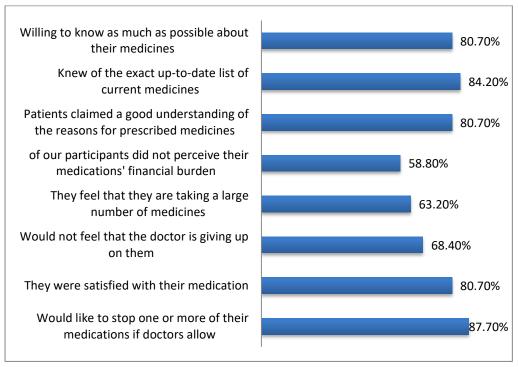|			
I1) I have a good understanding of the reasons I was prescribed each of my medicines	92 (80.7)	8 (7.0)	13 (11.4)
I2) I know exactly what medicines I am currently taking, and/or I keep an up-to-date list of my medicines	96 (84.2)	8 (7.0)	10 (8.8)
I3) I like to know as much as possible about my medicines	92 (80.7)	9 (7.9)	13 (11.4)
I4) I like to be involved in making decisions about my medicines with my doctors	68 (59.6)	13 (11.4)	33 (28.9)
I5) I always ask my doctor, pharmacist or other healthcare professional if there is something I don't understand about my medicines	94(82.5)	5 (4.4)	15 (13.2)
Global questions			
G1) If my doctor said it was possible, I would be willing to stop one or more of my regular medicines	100 (87.7)	7 (6.1)	7 (6.1)
G2) Overall, I am satisfied with my current medicines	92 (80.7)	6 (5.3)	16 (14.0)

Figure 1 Patients Attitude towards Deprescribing based on (PATD) questionnaire (%)

Table 3 illustrated the participants' characteristics by the median score of rPATD subscales. Overall the median scores did not reveal statistically significant differences in the median score of rPATD subscales among various participants' demographic characteristics. The exception was that those 80 and above had a lower median score on the global subscale than other age groups, $p < 0.02$. Also, the illiterate scored higher median than other educational groups on the burden factor subscale, $p < 0.01$. Similarly, the number of medications did not show differences in the median scores of rPATD and subscales.

characteristics	Burden factor n (range)	Appropriateness factor n (range)	Concerns about stopping factor n (range)	Involvement factor n (range)	Global questions (range)
Table 3 Participants characteristics by median score of rPATD subscales.					
Age in years					
60 - 69	7(7)	7(8)	4.5(10)	11(10)	5(4)
70 - 79	7(9)	8(8)	4(10)	11(9)	5(4)
80 y +	6(3)	8(5)	6(6)	10.5(6)	4(3)
p-value	0.37	0.69	0.56	0.4	0.02
Gender					
Male	7(8)	8(8)	4.5(10)	11(10)	5(4)
Female	6(9)	7.5(8)	4(10)	11(10)	5(4)
p-value	0.56	0.95	0.33	0.06	0.46
Status					
Married	7(9)	8(8)	4(10)	11(10)	5(4)
Unmarried	7(7)	8(5)	3(10)	11(8)	5(4)
p-value	0.54	0.41	0.36	0.98	0.58
Qualification					
illiterate	8(9)	8(8)	4.5(9)	11(10)	5(4)
<2nd school	6(8)	8(5)	3(10)	11(8)	5(4)

>2nd school	5(6)	7(8)	6(10)	11(10)	5(4)
p-value	0.01	0.24	0.06	0.38	0.93
Number of medications					
5-8 medications	6(9)	8(8)	4(10)	11(10)	5(4)
>=9 medications	7(9)	7(8)	11(10)	11(10)	5(4)
p- value	0.84	0.73	0.12	0.20	0.20

Binary logistic regression showed the comparison of the patients' categories as high and low attitudes towards deprescribing as expressed by above and median and below (dependent variables) with their characteristics (independent variables) (Table 4). The positive attitude towards deprescribing was higher among those younger 80, p<0.05. The male patients, unmarried and low educated group, had higher positive attitudes as expressed by the high median score compared to other groups. However, these differences did not reach statistical significance.

Table 4 Binary logistic regression of participants characteristics by attitude towards deprescribing as expressed by above and below median

Characteristics	rPATD BY MEDIAN		p-value	OR (95% C.I)	PPPp-value
	<=MEDIAM41 N (%) 59(51.8)	>MEDIAN41 N (%) 55(48.2)			
60 - 69 y	31(48.4)	33(51.5)		5.228(0.964-28.337)	
70 - 79 y	20(50.0)	20(50.0)	0.17	4.535(0.794-25.908)	0.05
80 y +	8(80.0)	2(20.0)		Reference	
Male	25(48.1)	27(51.9)	0.47	1.953(0.806-4.729)	0.13
Female	34(54.8)	28(45.2)		Reference	
Married	53(53.5)	46(46.5)	0.32	Reference	0.15
Unmarried	6(40.0)	9(60.0)		2.462(0.707-8.577)	
illiterate	25(52.1)	23(47.9)		1.679(0.655-4.302)	
<2ndschool	11(40.7)	16(59.3)	0.34	2.762(0.911-8.368)	0.19
>2ndschool	23(59.0)	16(41.0)		Reference	

Table 5 showed the median (range) of comorbidities was 3(6), and most of the participants had cardiovascular (86.0%) and metabolic disease (79.8%). Patients took from 5 to 17 medications with a median (range) of 8(12). The most commonly used medications were as follow: statins (48.2%), proton pump inhibitor (46.4%), beta-blocker (41.8%), insulin (38.2%), biguanides (35.5%) and Anticoagulants (22.7). The median (range) of diseases was 3(6). Patients were taking from 5 to 17 medications with a median (range) of 8(12).

Table 5 Medical condition and Medications used by patients

Medical condition	Frequency (%)
cardiovascular	98 (86.0)
metabolic	91(79.8)
renal	28 (24.6)
respiratory	24 (21.1)
neurological	18 (15.8)
oncological	11 (9.6)
urological	11 (9.6)

Drug	Frequency (%)
statin	53 (48.2)
proton pump inhibitors (PPI)	51 (46.4)
Beta-blocker (B blocker)	46 (41.8)
Insulin	42 (38.2)
Biguanides	39 (35.5)
Calcium Chanel blocker (CCB)	35 (31.8)
vitamin supplement	28 (25.5)
Anticoagulant.	25 (22.7)
Angiotensin receptor blocker (ARB)	23 (20.9)
Thyroxine.	21 (19.1)
dipeptidyl peptidase inhibitors (DPP4)	20 (18.2)
vitamin D.	17 (15.5)
beta-agonist (B agonist)	16 (14.5)
Angiotensin converting enzyme inhibitors. (ACEI)	15 (13.6)
steroids	14 (12.7)
Anti-platelets	13 (11.8)
Sulfonylurea	13 (11.8)
anti-depressants (TCA and SSRI)	12 (10.9)
Nitrates	12 (10.9)
calcium	12 (10.9)
iron	11 (10.0)
laxatives	10 (9.1)
Muscarinic antagonist	10 (9.1)
NSAIDs.	9 (8.2)
Antacids	8 (7.3)
Histamine blocker (H antagonist)	8 (7.3)
Vasodilator	8 (7.3)
Antiemetic	7 (6.4)
Xanthine oxidase inhibitor	6 (5.5)
Carbamazepine	4 (3.6)
Levetiracetam	3 (2.7)
alphareductase inhibitor	3 (2.7)
Miscellaneous.	30 (27.3)

Not mutually exclusive

4. DISCUSSION

Polypharmacy is common among our participants as they took 5 to 17 medications, median (range) of 8 (12). Furthermore, 66% of participants took 5–8 regular medicines, and 34% took nine medicines or more. A finding confirmed with a previous study (Rozsnyai et al., 2020). About 63% of respondents believed they were taking a considerable number of medications. Nonetheless, a prior study indicated that elderly persons frequently utilize unneeded drugs. Therefore understanding the attitudes older adults and caregivers toward deprescribing will help physicians to optimize their practice (Lundby et al., 2021; Reeve et al., 2018).

Deprescribing under the supervision of a healthcare practitioner to reduce polypharmacy and retrain better outcomes appears to be a safe and accepted therapeutic practice (Reeve, 2020; Thillainadesan et al., 2018). Moreover, it maximizes patient benefits and avoids the potential harm of returning medical conditions and medication withdrawal due to adverse reactions (Ouellet et al., 2018; Reeve et al., 2017). Overall, 87.7% of patients agreed to deprescribe some of their medications through discussion with their

physicians. This finding is confirmed with previous studies on Arab patients (Nusair et al., 2020) and other patients (Lundby et al., 2021; Reeve et al., 2019; Reeve et al., 2018; Rozsnyai et al., 2020). The practicing physician should be cautious when dealing with the patient's favorable attitude about deprescribing. Despite the percentage of people who agree to stop some of their medications in real life, it may not be as high. Previous studies show that discontinuing of probable inappropriate drugs in the elderly demonstrated startlingly different acceptance rates of 82%-33% (Garfinkel & Mangin, 2010; Williams et al., 2004).

However, 80.7% of our patients stated their satisfaction with their drugs which may attribute to good trust in physicians, as 68.4% would not feel that the doctor is giving up on them. This finding is similar to a study that reported a positive association between a good patient-doctor relationship and a favorable attitude to deprescribing (Rozsnyai et al., 2020). This finding provides an opportunity to avoid the risks of polypharmacy and inappropriate medications. Interestingly, many of our participants did not perceive their medications' financial burden, although the quantity of medications is high and should be a financial burden on them. This finding could be because the government hospital provides health services for free. Notably, most of our patients claimed to know the up-to-date list of current medicines and their prescription reasons. However, this result was discordant with what we observed during the data collection process; we found difficulties obtaining correct information about their medications when asked the patients about them.

The frequency of our patients' significant cardiovascular and metabolic illnesses was reflected in the most regularly prescribed drugs (statins, beta-blockers, insulin, biguanides, and anticoagulants). We did not find differences between the perceived burden, belief inappropriateness, concerns about stopping, Involvement in medication management, and global questions across individual patient characteristics. This finding is different from another study (Lundby et al., 2021). A further study reported that polypharmacywas associated with a higher "burden" score, an increased "concerns about stopping," a lower "appropriateness" (Lundby et al., 2021). The readiness to deprescribe failed to reach a significant association with quantity of medications, age, and sex (Rozsnyai et al., 2020). In a previous study, a low score in the stopping medication domain was the predictor of readiness to deprescribe in participants (Reeve et al., 2019). The positive attitude towards deprescribing was higher among those younger 80, p<0.05. Also, illiterate scored higher on the burden factor subscale, p<0.01. The unmarried and low educated male patients had higher positive attitudes as expressed by the high median score compared to other groups. Nevertheless, they were not statistically significant. The growing range of drugs became associated with higher burden and an increased fear of stopping and inappropriateness of medications respectively.

Currently, the health services in Saudi Arabia are undergoing comprehensive reform, focusing on supporting physicians in evidence-based practice. Moreover, health services face a progressive increase in chronic diseases, which poses quality, and safety challenges (Al Asmri et al., 2020). Clinicians should increase awareness about potentially inappropriate medication and plan their deprescribing practice for individual patients. For example, a previous study emphasized raising awareness about polypharmacy to initiate deprescribing in routine practice (Achterhof et al., 2020). Deprescribing efforts should also be supported through efforts to overcome barriers and strategies for sustainability by the treating team (Scott et al., 2021). Furthermore, receiving pharmacists' intervention with their profound knowledge about medications as interprofessional team members; will support the treating team's evidence-based practice. This intervention is associated with a positive impact on coronary heart disease, blood pressure, glycemic control, quality of life, and lipid profile (Alfayez et al., 2017; Alhabib et al., 2016; Jabri et al., 2020; Makeen, 2017; Mussina et al., 2019).

Future research may investigate the suitability of certain deprescribing medications in specific populations also, how to implement deprescribing feasibly and cost-effectively; furthermore, how to involve patients throughout the way to achieve good health and quality life outcomes. Moreover, the trial on a computerized support system that aligns older adults' health and medication goals with management strategies would be supportive (Sawan et al., 2021).

Limitations of the study

Despite concordance with international findings and its conduction in one of the biggest hospitals in Riyadh, the authors cannot ascertain the generalizability of the findings, as all of the participants come from a single center. Nevertheless, this study could improve awareness, attitude, and practice toward deprescribing. Moreover, it sheds light on polypharmacy and draws physicians' and policymakers' attention to deprescribing.

5. CONCLUSION / RECOMMENDATIONS

Most inpatient elderly are open to deprescribing if accompanied by trust, increasing awareness, evidence-based, and individually tailored. We recommend the cooperation of Physicians, pharmacists, nurses, and Caregivers to simplify the polypharmacy when

appropriate. Furthermore, the health care system should provide all the necessary support for the health care team in this aspect. Further research should be conducted on deprescribing in multiple centers from all regions of Saudi Arabia. Such studies would contribute to the literature of deprescribing in Arabic-speaking countries and globally.

Data and materials availability
All data associated with this study are present in the paper.

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